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Opportunity Title: Astrophysics: Far-Infrared, Submillimeter, and Millimeter-wave Instruments for Astronomy
Opportunity Reference Code: 0097-NPP-MAR26-GSFC-Astrophys

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0097-NPP-MAR26-GSFC-Astrophys

How to Apply All applications must be submitted in Zintellect

Please visit the NASA Postdoctoral Program website for application instructions and requirements: How to Apply | NASA Postdoctoral Program (orau.org)

A complete application to the NASA Postdoctoral Program includes:

1. Research proposal
2. Three letters of recommendation
3. Official doctoral transcript documents

Application Deadline 4/2/2026 6:00:59 PM Eastern Time Zone

Description **About the NASA Postdoctoral Program**

The NASA Postdoctoral Program (NPP) offers unique research opportunities to highly-talented scientists to engage in ongoing NASA research projects at a NASA Center, NASA Headquarters, or at a NASA-affiliated research institute. These one- to three-year fellowships are competitive and are designed to advance NASA's missions in space science, Earth science, aeronautics, space operations, exploration systems, and astrobiology.

Description:

This work focuses on ultrasensitive detector design, fabrication, characterization, and integration into instruments for ground-based, airborne, and space-based astrophysical investigations. Current research focuses primarily on the development of large-format arrays of sensitive bolometers using superconducting transition edge sensors. We also have investigated single pixel optimization, including operation at very low powers for ultrasensitive (NEP~10^-19 W/Hz^0.5), novel noise suppression methods, and polarization sensitivity. Recent efforts include the development of hot electron bolometers, microwave kinetic inductance detectors, and novel microstrip spectrometers.

As a key portion of our detector development activities, our group is heavily involved in deploying instruments for suborbital observations. Instruments currently under development include the balloon-borne projects PIPER (Primordial Inflation Polarization Explorer), a 0.5-2mm wavelength camera for CMB polarimetry and EXCLAIM (EXperiment for Cryogenic Large-Aperture Intensity Mapping), a submillimeter intensity mapping experiment operating from 0.5-0.7mm. We also build instruments based on these detectors for ground-based observatories, including the GISMO-2 dual-band (1.15 and 2mm wavelength) camera for the 30m Millimeter Radio Telescope. Finally, technology development for large format bolometer arrays and for MKID-based instruments for mid- and far-infrared imaging

and spectroscopy are being intensively pursued and offer unique opportunities for postdoctoral research.

Location:
Goddard Space Flight Center
Greenbelt, Maryland

Field of Science: Astrophysics

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Applications with citizens from Designated Countries will not be accepted at this time, unless they are Legal Permanent Residents of the United States. A complete list of Designated Countries can be found at: https://www.nasa.gov/oiir/export-control.

Eligibility is currently open to:

- U.S. Citizens;

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- U.S. Lawful Permanent Residents (LPR);
- Foreign Nationals eligible for an Exchange Visitor J-1 visa status; and,
- Applicants for LPR, asylees, or refugees in the U.S. at the time of application with 1) a valid EAD card and 2) I-485 or I-589 forms in pending status

Questions about this opportunity? Please email npp@orau.org

Point of Contact Mikeala

Eligibility Requirements

- **Degree:** Doctoral Degree.